IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Canceled).

Claim 2 (Currently Amended): A Raman amplification method according to claim 8, wherein ~~comprising steps of: inputting from a signal output end of an optical fiber a first pump light so as to Raman amplify an optical signal in said optical fiber; and~~

~~inputting from a signal input end of the optical fiber a second pump light having a shorter wavelength than the first light so as to Raman amplify the first pump light, wherein~~

a wavelength difference between the optical signal and said second pump light being in an inclusive range of 20 THz through 26 THz.

Claim 3 (Canceled).

Claim 4 (Currently Amended): A Raman amplification method according to claim 2, wherein:

a wavelength difference between the optical signal and the second pump light being not less than 18 THz and a wavelength difference between the optical signal and the third pump light being not less than 18 THz.

~~a central wavelength of the second pump light being shorter than a central wavelength of the first pump light by an amount of Raman shift.~~

Claims 5-6 (Canceled).

Claim 7 (Currently Amended): A Raman amplification method according to claim ~~2,~~ ~~further comprising a step of:~~ 8, wherein said second pump light having a different central wavelength than said third pump light.

~~introducing a third pump light so as to Raman-amplify said second pump light.~~

Claim 8 (Currently Amended): A Raman amplification method comprising steps of:

inputting from a signal output end of an optical fiber a first pump light so as to Raman-amplify an optical signal in said optical fiber;

inputting from a signal input end of the optical fiber a second pump light having a shorter wavelength than the first pump light so as to Raman-amplify the first pump light, but not substantially amplify said optical signal; and

inputting from said signal output end of the optical fiber a third pump light with a shorter wavelength than the first pump light so as to Raman-amplify said first pump light, but not substantially amplify said optical signal, wherein

~~said second pump light having a different central wavelength than said third pump light~~ said second pump light propagates in said optical fiber in a direction substantially opposite to that of said third pump light.

Claim 9 (Previously Presented): A Raman amplification method according to Claim 8, wherein:

the central wavelength of said second pump light being shorter in wavelength than that of the first pump light by an amount of a Raman shift.

Claim 10 (Previously Presented): A Raman amplification method according to Claim 8, wherein:

said central wavelength of said second pump light not overlapping said optical signal.

Claim 11 (Previously Presented): A Raman amplification method according to Claim 8, wherein:

the central wavelength of said second pump light being shorter in wavelength than that of the first pump light by about an amount of a Raman shift.

Claim 12 (Previously Presented): A Raman amplification method according to Claim 8, wherein:

said second pump light is a wavelength division multiplex light.

Claim 13 (Previously Presented): A Raman amplification method according to Claim 8, further comprising a step of:

producing said first pump light from a semiconductor laser light source.

Claim 14 (Previously Presented): A Raman amplification method according to Claim 8, further comprising a step of:

introducing a fourth pump light so as to Raman-amplify said second pump light.

Claim 15 (Previously Presented): A Raman amplification method according to Claim 8, further comprising a step of:

inputting into said signal input end of said optical fiber a fifth pump light configured to Raman-amplify said optical signal.

Claim 16 (Previously Presented): A Raman amplification method according to Claim 15, further comprising a step of:

producing said first pump light from a semiconductor laser light source.

Claim 17 (Previously Presented) A Raman amplification method of claim 8, wherein said third pump light amplifies said second pump light.

Claim 18 (Currently Amended): ~~An optical transmission method comprising steps of:~~ The method of Claim 8, further comprising:

~~inputting from a signal output end of an optical fiber a first pump light so as to Raman-amplify an optical signal in said optical fiber;~~

~~inputting from a signal input end of the optical fiber a second pump light having a central wavelength that is shorter than that of the first pump light so as to Raman-amplify the first pump light; and~~

avoiding deterioration of system noise figure by maintaining a level of the optical signal to be substantially the same or greater than input and output levels throughout an entire span of the optical fiber.

Claim 19 (Currently Amended): ~~An optical transmission~~ The method according to Claim 18, further comprising a step of:

introducing from said signal output end of said optical fiber a third pump light so as to Raman-amplify said first pump light.

Claim 20 (Currently Amended): ~~An optical transmission~~ The method according to Claim 18, wherein:

a central wavelength of said second pump light being shorter in wavelength than that of the first pump light by an amount of a Raman shift.

Claim 21 (Currently Amended): ~~An optical transmission~~ The method according to Claim 18, wherein:

said central wavelength of said second pump light not overlapping a wavelength of said optical signal.

Claim 22 (Currently Amended): ~~An optical transmission~~ The method according to Claim 18, wherein:

a central wavelength of said second pump light being shorter in wavelength than that of the first pump light by about an amount of a Raman shift.

Claim 23 (Currently Amended): ~~An optical transmission~~ The method according to Claim 18, wherein:

said second pump light is a wavelength division multiplex light.

Claim 24 (Currently Amended): ~~An optical transmission~~ The method according to Claim 18, wherein:

a difference between said level of said signal through the entire span of said optical fiber and input/output levels being within 0.5dB.

Claim 25 (Previously Presented): An optical transmission method comprising steps of:

inputting from a signal output end of an optical fiber a first pump light so as to Raman-amplify an optical signal in said optical fiber;

inputting from a signal input end of the optical fiber a second pump light having a shorter wavelength than the first pump light so as to Raman-amplify the first pump light; and

controlling a wavelength dependency of a system noise figure by selecting a central wavelength of said second pump light to be a predetermined wavelength.

Claim 26 (Previously Presented): An optical transmission method according to Claim 25, wherein:

said controlling step includes controlling both noise figure and gain.

Claim 27 (Previously Presented): An optical transmission method according to Claim 25, wherein:

said controlling step includes flattening a wavelength dependency of the noise figure.

Claim 28 (Previously Presented): An optical transmission method according to Claim 25, wherein:

said second pump light is a wavelength division multiplex light.

Claim 29 (Previously Presented): An optical transmission method according to Claim 25, wherein:

said second pump light is not a wavelength division multiplex light.

Claim 30. (New) The Raman amplification method according to Claim 8, wherein:

a wavelength difference between the optical signal and said second pump light being not less than 18 THz.

Claim 31. (New) A Raman amplification method according to Claim 8, wherein:

Said third pump light amplifies said second pump light.